CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

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ENGLISH

FINAL VERBATIM RECORD OF THE THREE HUNDRED AND NINTH MEETING

held at the Palais des Nations, Geneva,
on Thursday, 29 June 1967, at 10.30 a.m.

Chairman: U Maung Maung (Burma)

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PRESENT AT THE TABLE

Brazil:	Mr. A.F. AZEREDO da SILVEIRA
	Mr. C.A. de SOUZA e SILVA
	Mr. S. de QUEIROZ DUARTE
Bulgaria:	Mr. K. CHRISTOV
	Mr. B. KONSTANTINOV
	Mr. T. DAMIANOV
	Mr. D. KOSTOV
Burma:	U MAUNG MAUNG
	U KYAW MIN
Canada:	Mr. E.L.M. BURNS
	Mr. S.R. RAE
	Mr. C.J. MARSHALL
	Mr. J.R. MORDEN
Czechoslovakia:	Mr. V. VAJNAR
Ethiopia:	Mr. A. ZELLEKE
	Mr. B. ASSFAW
India:	Mr. V.C. TRIVEDI
	Mr. K.P. JAIN
Italy:	Mr. G.P. TOZZOLI
	Mr. E. FRANCO
	Mr. F. SORO
Mexico:	Mr. J. CASTANEDA
	Miss E. AGUIRRE
	Mr. F. CORREA
Nigeria:	Alhaji SULE KOLO
	Mr. B.O. TONWE
Poland:	Mr. J. GOLDBLAT
	Mr. E. STANIEWSKI

Romania:	Mr. N. ECOBESCO
	Mr. O. IONESCO
	Mr. C. GEORGESCO
	Mr. A. COROIANU
Sweden:	Mrs. A. MYRDAL
	Mr. A. EDELSTAM
	Mr. R. BOMAN
	Mr. U. ERICSSON
Union of Soviet Socialist Republics:	Mr. A.A. ROSHCHIN
	Mr. V.P. SUSLOV
	Mr. I.M. PALENYKH
United Arab Republic:	Mr. H. KHALLAF
	Mr. A. OSMAN
	Mr. M. SHAKER
United Kingdom:	Sir Harold BEELEY
	Mr. R.I.T. CROMARTIE
United States of America:	Mr. W.C. FOSTER
	Mr. G. BUNN
	Mr. C.G. BREAM
	Mr. C. GLEYSTEEN
Special Representative of the Secretary-General:	Mr. D. PROTITCH
Deputy Special Representative of the Secretary-General:	Mr. W. EPSTEIN

1. The CHAIRMAN (Burma): I declare open the three hundred and ninth plenary meeting of the Conference of the Eighteen-Nation Committee on Disarmament.

2. Mrs. MYRDAL (Sweden): I wish to speak today about one of the most important tasks on our agenda, to which however practically no attention has been paid so far during this session of the Committee. I am referring to the "Urgent need for suspension of nuclear and thermonuclear tests" -- to use the exact wording of the heading of last year's General Assembly resolution 2163 (XXI). In that resolution the Eighteen-Nation Committee on Disarmament is requested "to elaborate without any further delay a treaty banning underground nuclear weapon tests." (ENDC/185)

3. We have all given due recognition to the priority of the non-proliferation issue. But this Committee cannot ignore that other important items also have been entrusted to it by the supreme organ of the United Nations. As repeatedly stressed by my delegation, an agreement prohibiting underground tests as well as a cut-off agreement should be treated, together with the non-proliferation issue, as parts of one comprehensive pattern. Of those other agreements the test-ban agreement is placed in the foreground by the United Nations. We should not be the cause once again of keen disappointment in the General Assembly, which has repeatedly sought to dispose of this matter once and for all.

4. I wish to recall at the outset in brief terms the history of the test-ban issue. By the way, I have used, as a valuable instrument to help me recall this history, the study prepared by the Secretariat under the title of The United Nations and Disarmament 1945-1965.* Its chapter 7 deals in a very clear way with the question of discontinuance of nuclear-weapon tests. It reminds us that already thirteen years ago, in 1954, suggestions were first made for an independent agreement to ban the testing of nuclear weapons. It is natural for me to make a special point of recalling that that proposal was submitted by the then Prime Minister of India, the late Jawaharlal Nehru.

5. Since that time the matter has been the subject of lengthy international negotiations, and in those negotiations the question of control has always had the most prominent role. But we should take encouragement from the fact that when this Committee came into being one of its immediate achievements was to sweep away some of

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* Office of Public Information. United Nations, New York. Sales No.67.I.9

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the most elaborate and most costly control arrangements which had previously been tentatively agreed upon by the three nuclear-weapon Powers. We should also recall what a relief the whole world felt when a first positive result was reached and the Treaty banning nuclear-weapon tests in the atmosphere, in outer space and under water (ENDC/100/Rev.1) was signed in Moscow on 5 August 1963.

6. That treaty was rightly hailed by all of us as an important step -- but just one step -- on the road towards nuclear disarmament. We all know that it was not complete: underground explosions had to be left outside its scope because of a lack of agreement between the main Powers just on the methods for monitoring a ban on the underground tests. But an assurance that a complete treaty would soon be forthcoming was supposed by the world community to be contained in the preamble of the Treaty, as the "original Parties" had formulated a vow that they were "Seeking to achieve the discontinuance of all test explosions of nuclear weapons for all time, determined to continue negotiations to this end..."

7. This reassurance was the more crucial as at the end of 1962 the General Assembly had already, by adopting its resolution 1762 (XVII) by a vast majority, condemned all nuclear test explosions. That condemnation was followed up a year later by the virtually unanimously-approved resolution 1910 (XVIII), which requested our Committee "to continue with a sense of urgency" negotiations to achieve this discontinuance of all test explosions (ENDC/116).

8. No fulfilment of those resolutions and assurances has however taken place. During its last two regular sessions the General Assembly has, as we all know, repeated its appeal, adopting resolutions not only requesting the Eighteen-Nation Committee on Disarmament to work out an agreement banning effectively all nuclear weapon tests in all environments, but also urging an immediate suspension of all nuclear weapon tests. I may refer here to resolutions 2032 (XX) (ENDC/161) and 2163 (XXI) (ENDC/185). The latter was approved virtually without any dissent from Members of the United Nations.

9. To demonstrate the insistence of the General Assembly on this vital matter, I wish to recall also the debate which took place last autumn in the First Committee of the General Assembly. Every speaker urged the early conclusion of a comprehensive test-ban treaty. If I quote only from statements by representatives of nuclear-weapon Powers this is due, of course, to their special responsibility when it comes to transforming into reality this unanimous clamour of the General Assembly to obtain a discontinuance of all nuclear weapon tests.

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10. In his intervention in the First Committee on 14 November 1966 the representative of the Soviet Union, Mr. Roshchin, said:

> "It is also extremely important to solve the problem of prohibiting all tests of nuclear weapons, which would be a significant obstacle to the further perfecting of nuclear weapons; it would prevent the appearance in the arsenals of States of nuclear and other types of weapons of mass destruction. The prohibition of underground nuclear tests would create propitious conditions for the solution of other disarmament problems.
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> "The position of the Soviet Union on this important question is well known; it has often been presented to the General Assembly and to the Eighteen Nation Committee on Disarmament. The Soviet Union has always come out in favour of the full prohibition of all tests of nuclear weapons including underground nuclear tests." (A/C.1/PV.1452, pp. 27-30)

11. The representative of the United States, Mr. Foster, said in the First Committee on 22 November 1966:

> "An effective comprehensive test-ban agreement would help put an end to the nuclear arms race and would be a major step in preventing the spread of nuclear weapons. It would, perhaps, be the most significant step we could take to supplement such a non-proliferation treaty." (A/C.1/PV.1460, p.21)

On the same day the representative of the United Kingdom, Lord Chalfont, gave several reasons why a test-ban treaty was "a crucial element in an effective non-proliferation policy", and went on to say of it:

> "Indeed, of the measures listed in the memorandum presented in Geneva last August by the eight non-aligned countries, it is, in my view, the most important and possibly the closest to agreement. And it would be wrong to underrate the importance of a test ban in itself as a measure of arms control." (ibid., p. 32)

12. Consistently with these statements, the nuclear-weapon Powers supported and voted for the aforementioned resolution of the General Assembly (2163 (XXI)) calling for the suspension of all nuclear weapon tests.

13. Against these statements and this record of voting, however, there have to be put the performances of the nuclear-weapon Powers as they appear in reality. Tests have not ceased. On the contrary, testing is continuing at an ever-accelerating tempo. According to figures I have available, nuclear explosions in the world numbered 36 in

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1964 -- that is, after the Moscow Treaty -- 40 in 1965 and 60 in 1966. Thus in the last year nuclear explosions have been shaking the earth at an average rate of more than once a week. The great majority of these explosions were underground tests performed by the nuclear-weapon Powers represented here in the Eighteen-Nation Committee on Disarmament. The yields, which earlier were low, have been extended into the megaton range.

14. It is evident that the exemption of underground nuclear explosions in the Moscow Treaty was intended to be temporary. Nevertheless, that exemption has been used by the nuclear-weapon Powers as permission for -- indeed a legitimization of -- the holding of such tests. The number of explosions in the atmosphere carried out by countries not parties to the Moscow Treaty is still low; but the trend is one of acceleration, and recently the yields have reached the megaton range with resulting widespread radioactive contamination of the atmosphere.

15. But let me return to the problem of how to reach a treaty banning underground tests. The obstacle is proclaimed to lie in the issue of control -- or, more precisely, in a lack of agreement among the nuclear-weapon Powers on the verification system needed for monitoring such a treaty. One side is upholding the thesis that on-site inspections are necessary to ensure that no violations occur; while the other side reiterates that national means of detection and verification are satisfactory and that no on-site inspections should be prescribed.

16. The non-nuclear-weapon Powers have not taken sides on this issue. Instead, we -- and I have in mind particularly the non-aligned members of the Eighteen-Nation Committee on Disarmament -- have continuously endeavoured to bridge the difference of views about the specific needs for verification. Let me make yet another try today.

17. It is high time that we in this Committee re-examined the question of verification, and particularly inspections, in a new light, taking account of recent developments in fact-finding machinery. The Swedish delegation is convinced that it has now become possible to reduce the divergencies of positions to a level so low that for practical purposes they could be written off. From the material available to my delegation I have drawn the conclusion, tentative in form but firm in conviction, that the scientific and technical difficulties that have prevented a generally-acceptable verification procedure to monitor an underground test-ban treaty have been steadily diminished and that they should now be quite small. This opinion is based on several reports about --

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(a) The development of increasingly sensitive teleseismic instruments and the establishment of large arrays of such instruments, significantly increasing the effectiveness of each individual instrument;

(b) the interest that has been manifested, in the General Assembly and elsewhere, in international co-operation for the exchange of seismic data, bringing further enhancement of the usefulness of national seismic stations;

(c) the impressive scientific research which has been done in several countries to improve methods for interpreting the data obtained and in particular the elaboration of several effective methods of identifying underground explosions and separating them from earthquakes;

(d) the facilities for surveillance from satellites, providing a capability to recognize and to understand patterns of human activity on the earth's surface.

18. The progress just mentioned is the result of extended and costly research and technical development undertaken mostly by the United States, the United Kingdom and the Soviet Union, which in later years have been joined in their efforts by other countries.

19. In Sweden we have been actively interested in the two first-mentioned developments, but we have also devoted scientific investigations to ascertaining how to evaluate the effectiveness of different identification methods for verification purposes -- the item I mentioned under (c).

20. We started from the assumption that there were certain political requirements for a convincing control system:

(1) it should provide sufficient deterrence against violations by making the probability of discovery sufficiently high;

(2) it should contain adequate assurance against the risk that "freaks of nature", in the form of earthquakes which would be similar in appearance to explosions, might induce unwarranted political accusations.

With these assumptions in mind, we have studied the effectiveness of published seismological identification methods in relation both to a system of verification with on-site inspection and to a system without such inspection. I will confine myself here to our general conclusions. We should be prepared to make available particulars of the probability methods employed.

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21. Some United States experience with the British so-called "complexity" method of identification from long distances indicates that in the system with inspection sufficient deterrence should be attainable with only one inspection in two years. Similarly, experience with another method, elaborated in the United States and requiring local or regional data such as might be obtained through a data exchange, indicates equal effectiveness. If both methods were combined, a further increase in effectiveness would result. Finally, still somewhat incomplete data on another British identification method, involving measurements of both long and short period waves, holds promise of still greater effectiveness.

22. These identification methods are indeed so effective that it now seems to have become meaningful to discuss verification without on-site inspection. In this second case the full guarantee against mistakes in the final evaluation of suspicious events, which in the first case was provided by inspection, would not exist; it is replaced by a procedure providing an extremely low statistical probability of mistaking an earthquake for an explosion. It can be shown that also in this non-inspection case the identification methods referred to earlier would provide sufficient deterrence: earthquakes would be mistakes for explosions only once in fifteen or more years.

23. These results of our study may seem optimistic. They may have to be adjusted when more extensive observational data are made available. But even with this reservation we are convinced that the situation is ripe for a renewed and thorough discussion of the political sufficiency of the seismological verification potential now at hand.

24. In this connexion I want to raise another, related, technical point. The estimates which I have just mentioned were made on the assumption of 200 detected shallow earthquakes per year in any politically-interesting region. A large part of these happen in seismologically-complicated island areas such as the Aleutians and the Kuriles. Considerable special studies have been made by the United States and the Soviet Union in order to obtain improved epicentre determinations of events in those localities. Of course, events deep in the earth or under the ocean would not be suspicious. This decreases the number of seismic events that have to be further scrutinized for identification purposes, and hence improves further the situation I was describing earlier. Last year I dealt in some detail with this issue (ENDC/PV.279, pp. 7, 8), and the United States delegation submitted an explanatory Conference document (ENDC/182) presenting the results of project Longshot. In that document reference was made to further experiments. I should therefore like to ask the United States representative to be good enough to add to his earlier contribution a description of later results.

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25. By these perhaps rather lengthy remarks on technical control matters I have tried to show that the whole concept of control in relation to a ban on underground nuclear explosions has to be looked at anew; to our mind, the control issue can no longer be used as a convenient reason for holding up an agreement in this field. The opinion has also become more widespread lately that there must perhaps be other reasons which underlie the political hesitation of the nuclear-weapon Powers to come to an agreement. It has been said publicly by a leading official of one of the main nuclear-weapon Powers that the underground testing programme is a very vital part of maintaining the effectiveness of the offensive force to provide a sure destruction.

26. With such statements in mind, I would think that the representatives of non-nuclear-weapon countries here would appreciate frank declarations from the representatives of the nuclear-weapon Powers on whether their Governments are really ready to stop nuclear weapon testing or, if they are not ready to do so, on whether it is for reasons of national security or for other reasons. The answer to this question is the more eagerly awaited by the non-nuclear-weapon countries as they will be asked to sign away for ever in the non-proliferation treaty their right to test as well as to manufacture any nuclear devices.

27. A further complication here seems to make its appearance in connexion with the discussion on the use of nuclear explosive devices for peaceful projects. When speaking on this problem at our meeting of 8 June the representative of the United States said:

> "It is a fact that the United States has not yet demonstrated that the technology for any -- I repeat, any -- specific peaceful application of nuclear explosions is technically and economically feasible. Some private companies in the United States and elsewhere and some foreign governments have evaluated certain applications of nuclear explosions for peaceful purposes and have made assessments that the technology, if successfully developed, would have economic potential in certain applications. Whether those evaluations will be confirmed requires further development, such as additional experiments with nuclear explosives." (ENDC/PV.303, para.20)

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28. Can this be interpreted as a new argument against a comprehensive test ban? Surely it should not be so. To our mind the problem could easily be handled within the framework of international regulation of the use of nuclear explosive devices presented in my last statement (ENDC/PV.302). "Use" ought to cover also "experiments" and be exclusively undertaken under international responsibility. This ought to be the obvious logic of the case, as otherwise explosions might be suspected to function in reality as weapon tests -- and this in whatever country they were nationally undertaken.

29. I wish to deal, finally, with one more important argument in favour of a rapid end to all testing which, to my mind, has not been given enough attention in the international debate. I am thinking of the release of valuable brain-power for civilian purposes which would be obtained. As a test-ban treaty would more or less stop research and development work for nuclear weapons, highly-qualified scientists and technicians would become available for other tasks.

30. In this connexion I should like to quote a statement made by the representative of the Soviet Union, Mr. Roshchin, at our meeting of 18 May, which related to the non-proliferation treaty but which seems to me equally valid for the test-ban treaty:

> "An important aspect of a treaty on the non-proliferation of nuclear weapons is the effect that it would have on the peaceful development of nuclear energy."

Mr. Roshchin later went on to say:

> "Renunciation by the non-nuclear countries of military ways of using atomic energy would enable them to concentrate all their scientific, technical and material resources on the peaceful utilization of the achievements of nuclear physics, which would undoubtedly widen their potentialities in that field." (ENDC/PV.297, paras. 15, 16)

Surely this argument can be applied with the same amount of force and conviction to the nuclear-weapon Powers themselves.

31. It is well known that what constitutes the heaviest drain on highly-specialized personnel is the further development of nuclear and other special military devices. The production stage is much more a routine matter of industrial application. In most developed countries a very important part of total scientific research is being directed and financed through the defence authorities. Of course, a significant side effect of these tremendous efforts also furthers peaceful purposes. But the main occupation of hundreds of thousands of qualified persons is directed towards war purposes. To these resources in personnel are in turn coupled large and highly-

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advanced laboratory resources. It certainly challenges our imagination to estimate what these people who are specialists in the delivery of solutions to complicated technical problems would achieve if directed towards such fields as medicine, urban planning or increased food production. A considerable part of their capacities could be so redirected already in connexion with a comprehensive test ban.

32. I wish to underline specifically in this context the needs of the less-developed countries. There can be no question about how important it would be if a rapid increase could be made -- by all our countries -- in the scientific and technical output for their benefit. To my mind by far the most important contribution -- far more important than any budget figures in financial terms would indicate -- which could be transferred from activities for military purposes to the benefit of the under-developed countries lies in the research and development sector. The difference in research capacity between countries is perhaps, in the final analysis, the most fatal gap of all.

The Conference decided to issue the following communiqué:

"The Conference of the Eighteen-Nation Committee on Disarmament today held its 309th plenary meeting in the Palais des Nations, Geneva, under the chairmanship of H.E. Ambassador U Maung Maung, representative of Burma.

"A statement was made by the representative of Sweden.

"The next meeting of the Conference will be held on Tuesday, 4 July 1967, at 10.30 a.m."

The meeting rose at 11.15 a.m.